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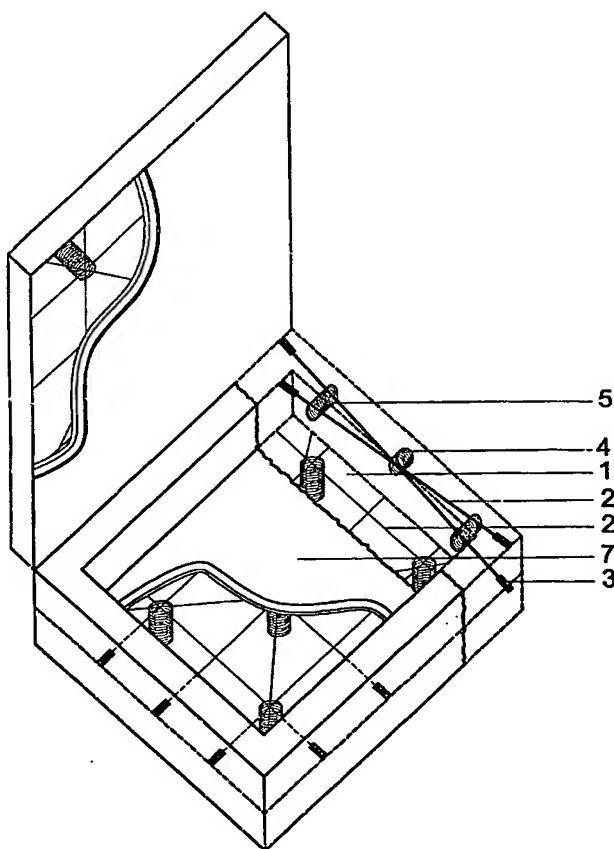
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ance Notes on Codes and Abbreviations" appearing at the begin-  
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(54) Title: THE PROTECTIVE LAPTOP-BRIEFCASE WITH SPRINGS

(57) Abstract: The protective laptop-briefcase with springs  
(3, 4, 5), containing plates (2), springs and flexible case in  
the interior, provides the owner with secure transport of the  
portable computer.



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## THE PROTECTIVE LAPTOP-BRIEFCASE WITH SPRINGS

The invention refers to a laptop-briefcase, containing plates, springs and flexible case in the interior so that the laptop is fitted correctly and remains safely in place.

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Other bags used to transport laptops have a lining made of foamed material and other stuff. In case the bag is strongly hit, there is danger regarding the safety of the laptop.

The advantage of this invention are the plates and springs inside the bag, which absorb  
10 the energy and vibration generated by a strong hit, reducing the risk of the laptop being damaged.

In order to achieve better safety, it is advisable to use different sizes of plates, springs and material, in order to create a first and second stage of energy absorption.

15

In the interior case, the vertical and horizontal sides are jointed with pliable texture, so that the size of the case can be reduced and increased depending on the size of the laptop and the portable remains in place.

20 The following design of the protective laptop - briefcase with springs is recommended. Figure ( 1 ) illustrates the opened bag, which meets all the requirements.

The bag consists of the exterior sides made of hard inflexible material, of the interior flexible case, of the springs ( 3 - 4 - 5), of the plates ( 2 ) placed in the interior of the  
25 bag, of the interior lining made of pliable texture ( 7 ) and of the meshes ( 1 ) formed by the plates ( 2 ).

The bag is separated in two parts. The bottom part, covering 2 / 3 of the bag's height, consists of the base and the sides that form an integral part.

30 The top part (cover) covers 1 / 3 of the bag's height.

Figure 1 illustrates the sections of the interior with the metallic meshes ( 1 ), the plates ( 2 ), the small springs ( 3 ) which are incorporated to the plates ( 2 ), the springs ( 4 ) placed between the interior meshes and the exterior sides of the bag and the springs  
35 ( 5 ), which are installed only in the vertical interior sides, so that the case is flexible.

Figure 2 illustrates the common plan of the two parts of the bag: the bottom part

(without the sides) that forms the base, as well as the top part (cover), since both parts have the same springs layout ( 3 - 4) and plates layout ( 2 ) and function.

The laptop is placed on the created mesh ( 1 ). This mesh (1) is placed in the middle of the bottom part of the bag. The respective mesh ( 1 ) is installed in the interior of the bag's top part.

Mesh ( 1 ) consists of eight plates ( 2 ).

Each edge of the plate ( 2 ) incorporates a spring ( 3 ), which is adjacent to the exterior sides of the bag.

The springs ( 3 ) are helpful, since they provide the mesh with full elasticity and so the energy generated by vibration is absorbed.

In five parts of the mesh ( 1 ) are placed plates respectively ( 4 ). Four of these are situated, where three plates ( 2 ) intersect and the fifth is placed in the center of the mesh, where four plates intersect ( 2 ).

Figure 3 illustrates a horizontal cut of the closed bag. Springs ( 4 ) between the mesh ( 1 ) and the bottom part ( 6 ) are clearly shown. Springs ( 4 ) are used for the absorption of the energy created by vibrations.

Figure 4 illustrates a vertical cut of the opened bag. A crosswise connection of the plates (2 ) creates a mesh ( 1 ). Between the exterior side of the bag and the cut point of the plates ( 2 ), the spring ( 4 ) is situated.

In the space left on the right and the left side created by the crosswise plates ( 2 ), are placed the springs ( 5 ).

The springs ( 5 ) connect the exterior side of the bag with the interior side of the case. This is how the case size is reduced and increased and that is the reason why the springs stick out from the mesh ( 1 ) created by the crosswise connection of the plates ( 2 ).

The lining ( 7 ) is made of pliable texture so that the size of the interior case is reduced and increased easier.

**CLAIMS**

1. The protective laptop-briefcase with springs contains in the interior plates ( 2 ), which form a mesh ( 1 ) with embedded springs ( 3 ) along their edges and thus along the 5 edges of the mesh ( 1 ), which are placed ( 4 ) between the meshes ( 1 ) and the exterior sides of the bag. These springs ( 5 ) have the same size and are located on the vertical exterior sides of the bag. It also includes a lining ( 7 ) forming the interior case of the bag.

10 2. The protective laptop-briefcase with springs contains, according to requirement (1), the following:

The meshes ( 1 ) are jointed at the external sides of the bag, in order to create interior gaps (spaces) from the external sides. The function of the meshes is to keep the computer away from the interior of the bag. The meshes ( 1 ) with the embedded 15 springs (3) absorb the first energy generated by vibrations.

3. The protective laptop-briefcase with springs contains, according to requirement ( 2 ), springs ( 4 ) that are placed between the spaces created among the meshes ( 1 ) and the external sides, and contribute to second energy absorption generated by vibrations.

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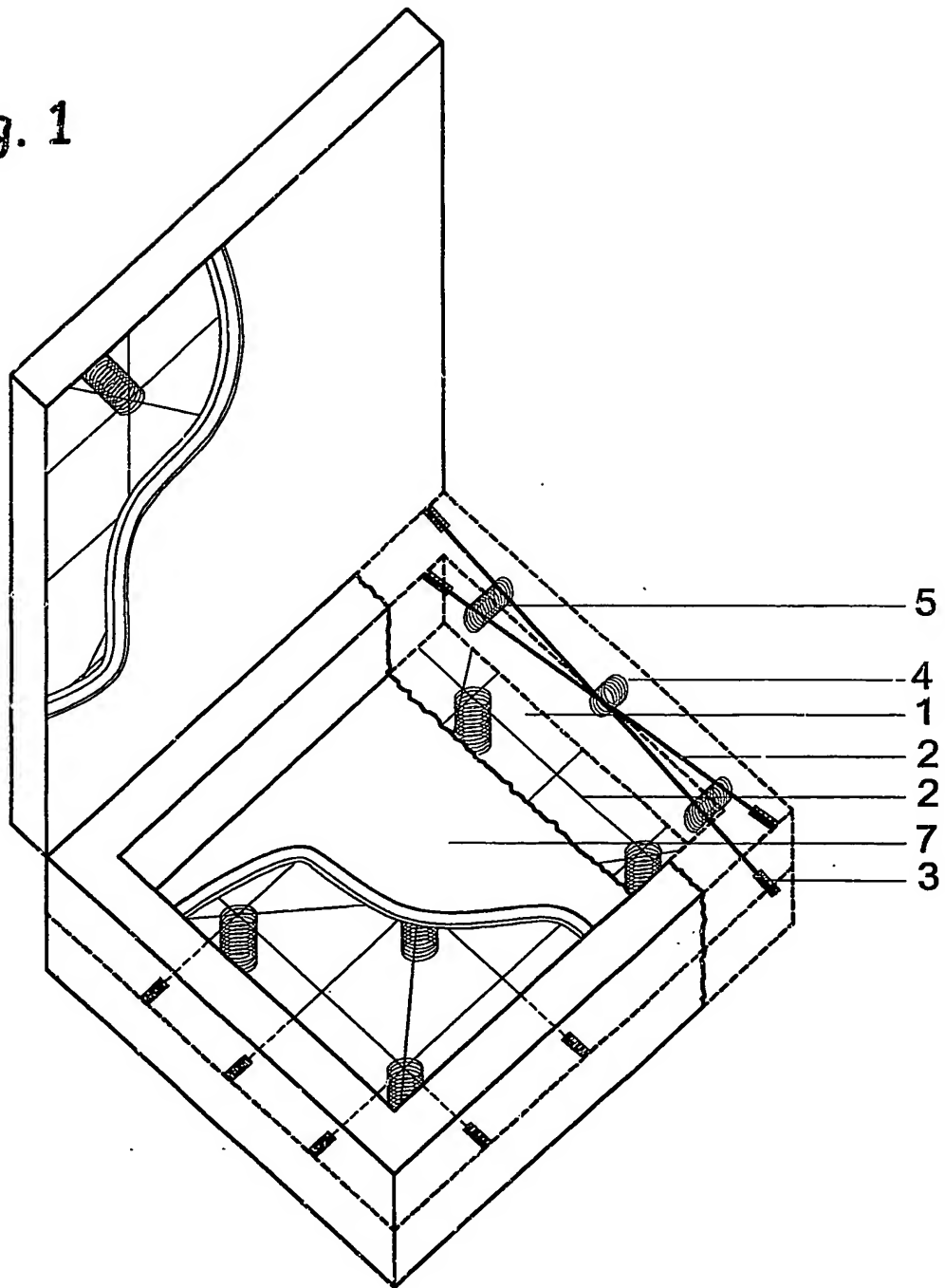
4. The protective laptop-briefcase with springs contains, according to requirement ( 1 ), lining ( 7 ) that covers all the meshes ( 1 ) and springs ( 3 - 4 - 5 ) and forms the interior case of the laptop.

The lining ( 7 ) has a pliable texture, so that the shape of all case sides can be changed. 25 Springs ( 5 ) are placed between the case sides and the bag sides, so that the size of the case can be reduced and increased and the portable computer remains in place.

5. The protective laptop-briefcase with springs according to the above requirements (1,2,3,4) provides the laptop with protection and transport safety.

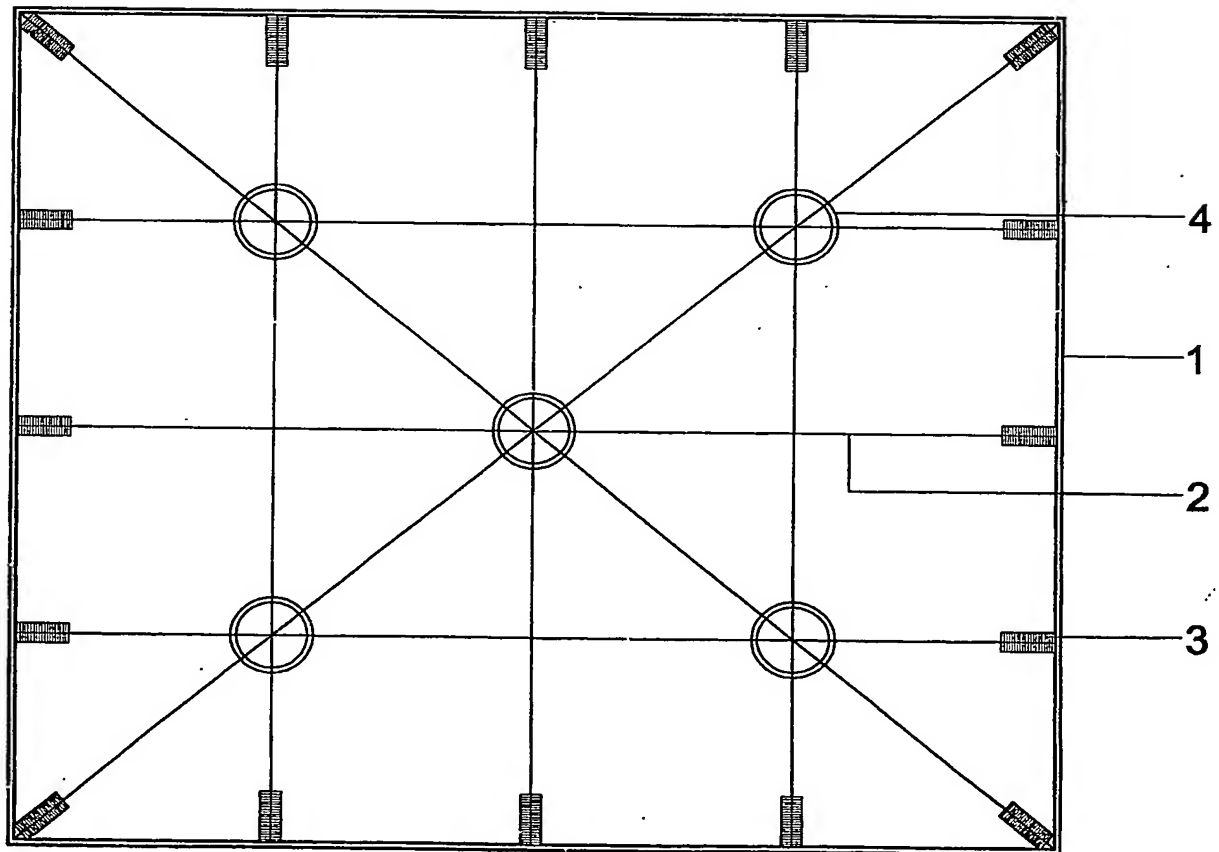
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Fig. 1



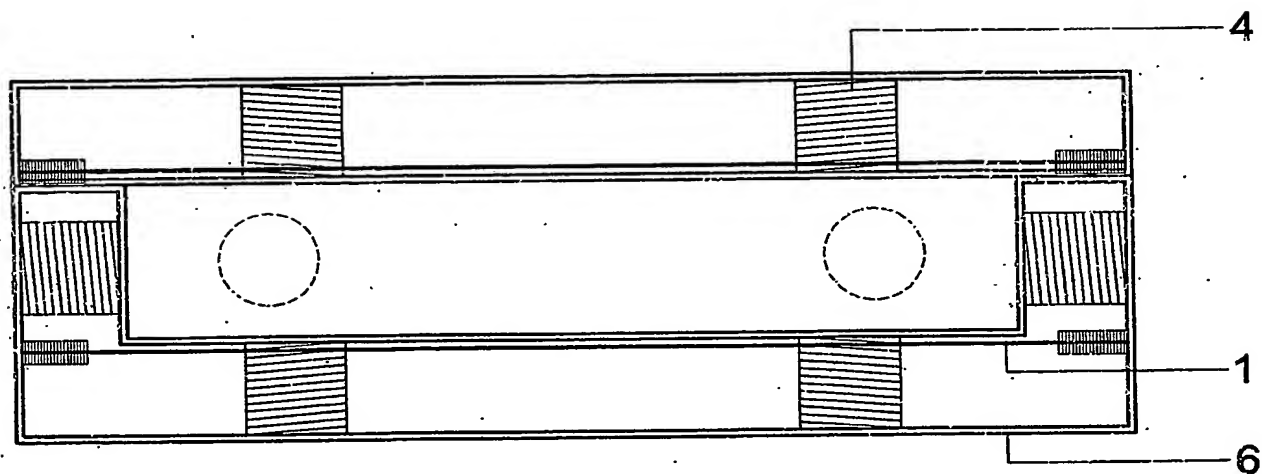
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Fig. 2



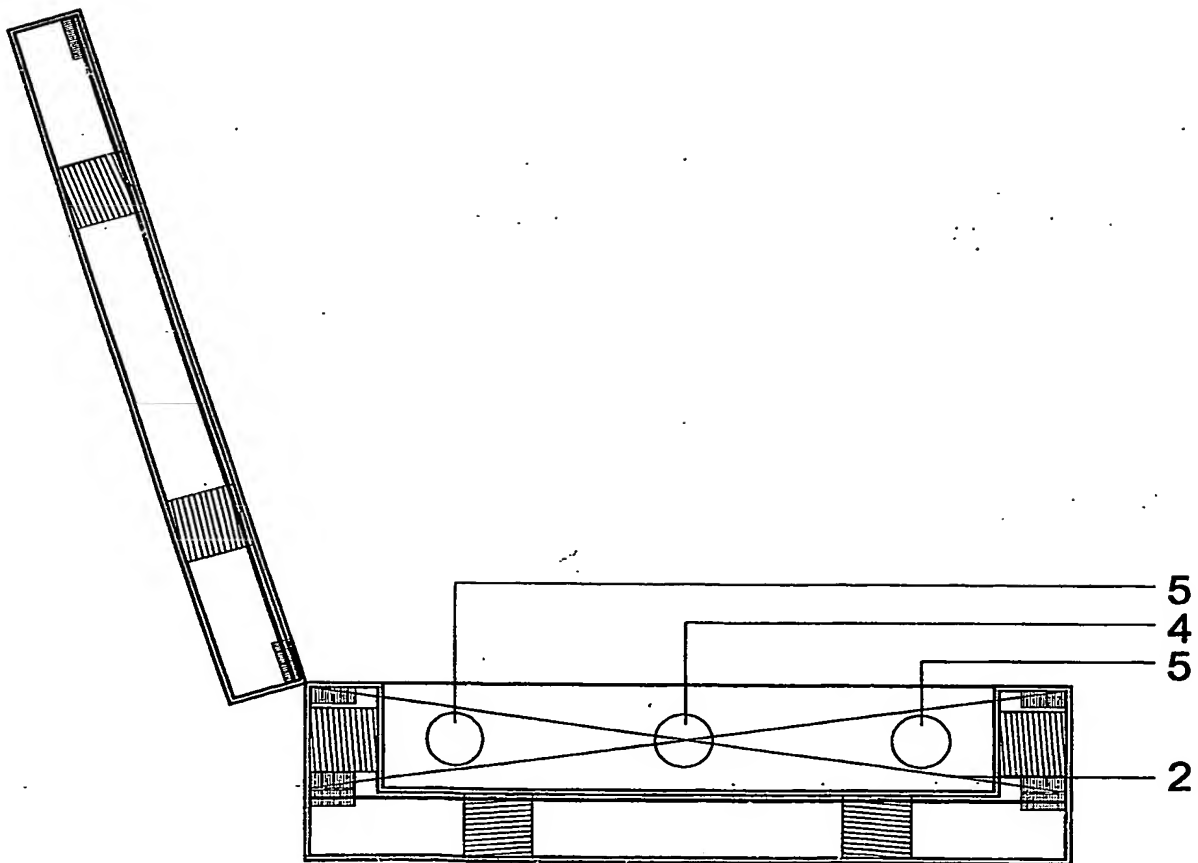
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Fig. 3



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Fig. 4





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## A. CLASSIFICATION OF SUBJECT MATTER

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Minimum documentation searched (classification system followed by classification symbols)

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Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 5 810 171 A (LEE YOUN-JAE) 22 September 1998 (1998-09-22) column 1, line 53 -column 2, line 28; claims; figures	1-5
A	SU 1 638 073 A (NIZOVTSSEV ALEKSANDR M) 30 March 1991 (1991-03-30) figures	1-5
A	US 5 226 557 A (NELSON THOMAS E) 13 July 1993 (1993-07-13) column 4, line 67 -column 5, line 7; claims; figures	1-5
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	<p>WO 02 26074 A (OFFERMANN GMBH &amp; CO KG ;OFFERMANN HUBERT (DE)) 4 April 2002 (2002-04-04) abstract; claims; figures</p>	1-5

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